

METHODS AND COMPOSITIONS FOR D..

Reed, John C., et al.

Application No. 10/748,128 - Docket No. 066821-0058

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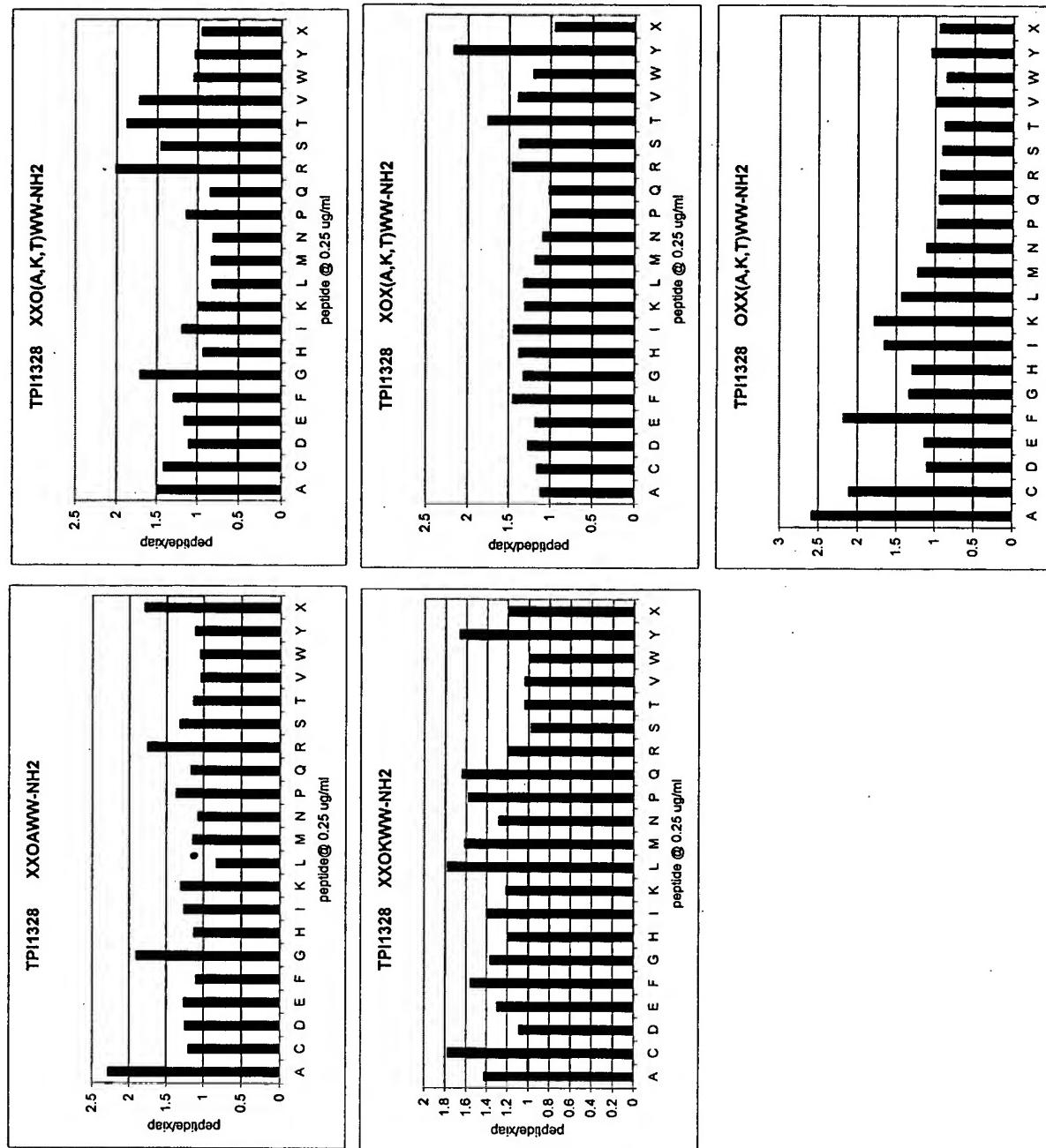
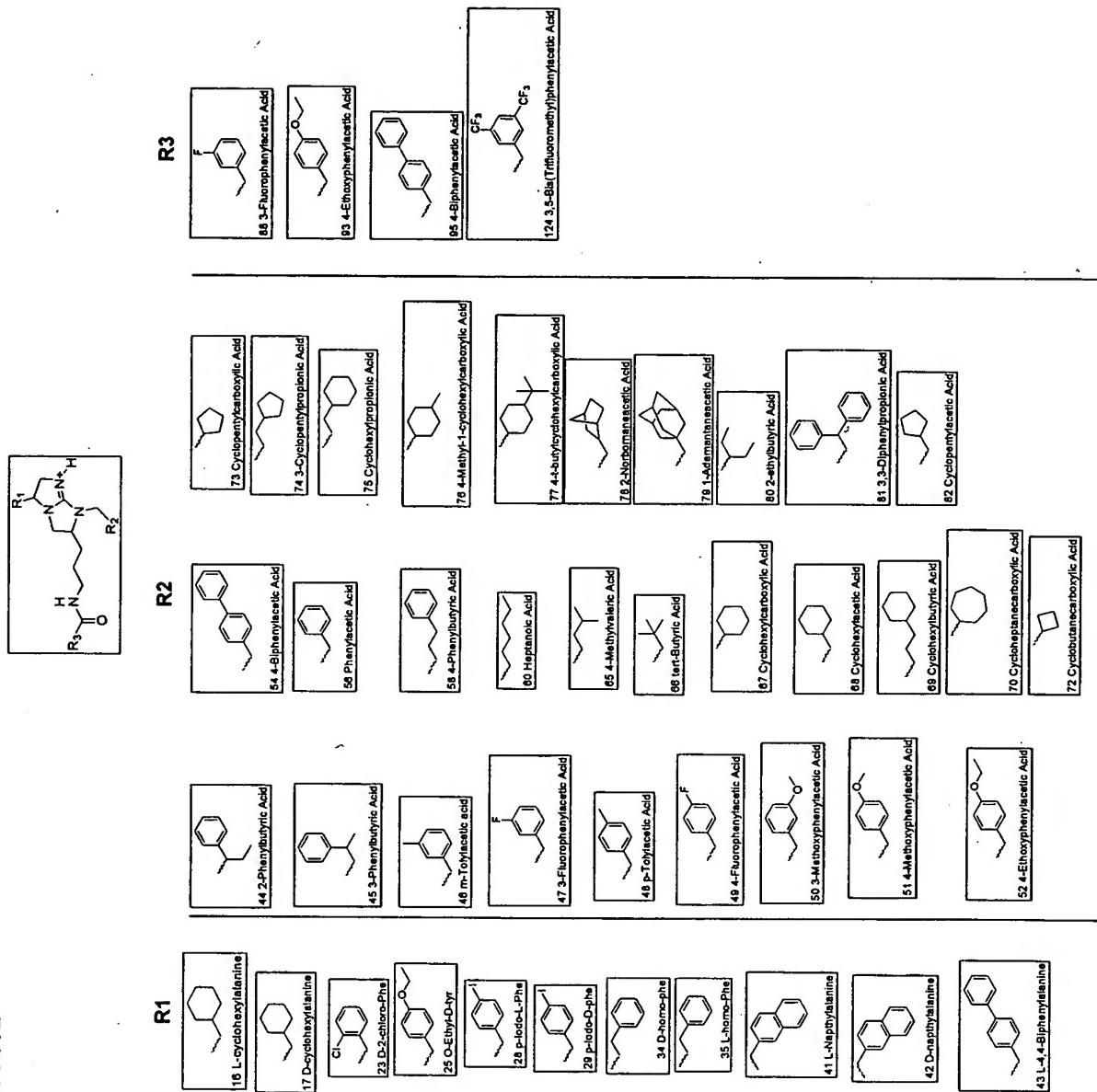


Figure 1

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Figure 7
TPI 882



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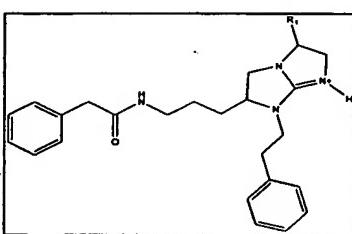
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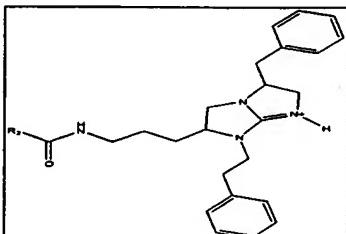
Figure 10

TPI 882 controls

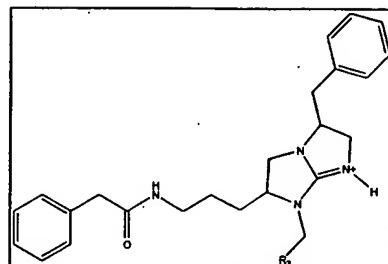
All the compounds below have activity at 8 ug/ml



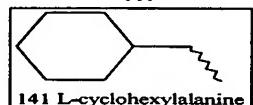
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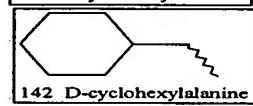
R2



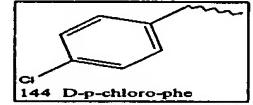
R3



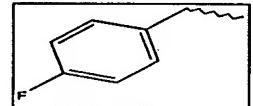
141 L-cyclohexylalanine



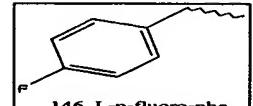
142 D-cyclohexylalanine



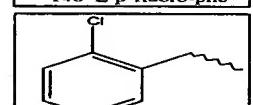
144 D-p-chloro-phe



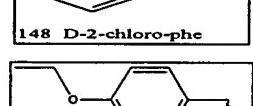
145 D-p-fluoro-phe



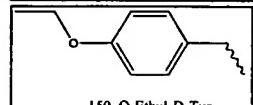
146 L-p-fluoro-phe



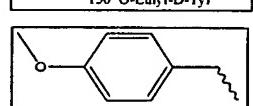
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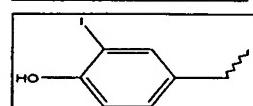
149 O-Ethyl-L-Tyr



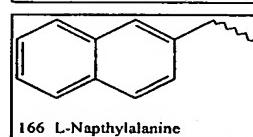
150 O-Ethyl-D-Tyr



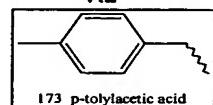
152 O-Methyl-D-Tyr



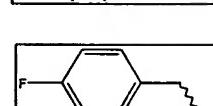
165 3,5-Diodo-Tyr(2BrZ)



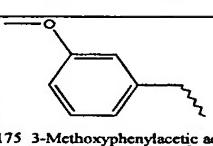
166 L-Naphthylalanine



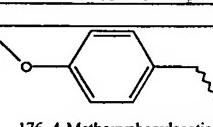
173 p-tolylacetic acid



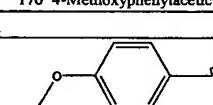
174 4-fluorophenylacetic acid



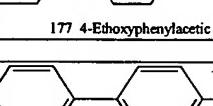
175 3-Methoxyphenylacetic acid



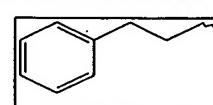
176 4-Methoxyphenylacetic acid



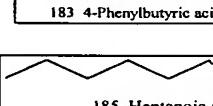
177 4-Ethoxyphenylacetic acid



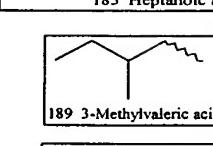
179 4-Biphenylacetic acid



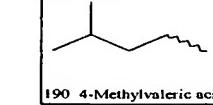
183 4-Phenylbutyric acid



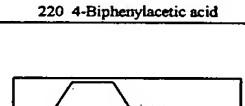
185 Heptanoic acid



189 3-Methylvaleric acid



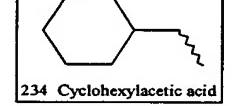
190 4-Methylvaleric acid



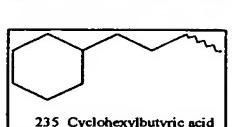
220 4-Biphenylacetic acid



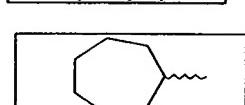
233 Cyclohexanecarboxylic acid



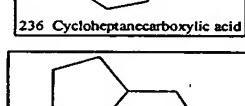
234 Cyclohexylacetic acid



235 Cyclohexylbutyric acid



236 Cycloheptanecarboxylic acid



240 3-Cyclopentylpropionic acid



249 3,5-bis-(trifluoromethyl)phenylacetic acid

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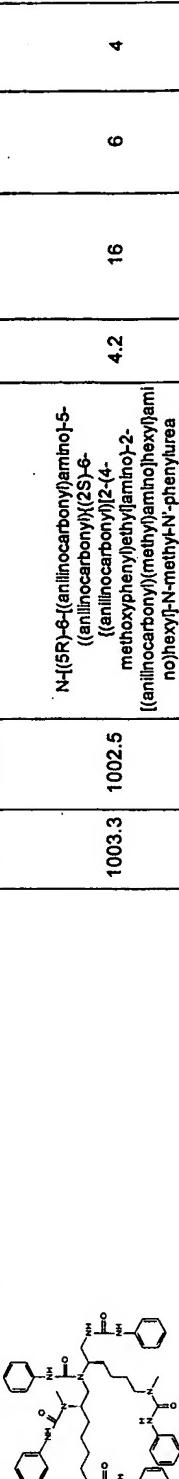
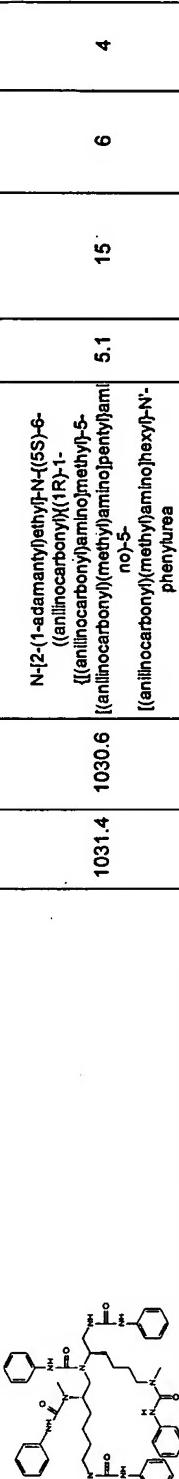
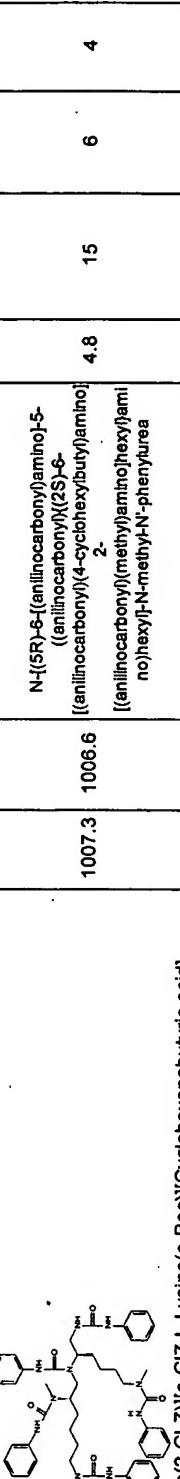
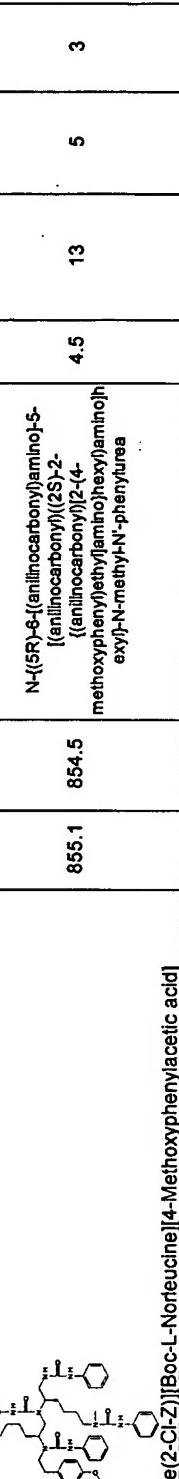
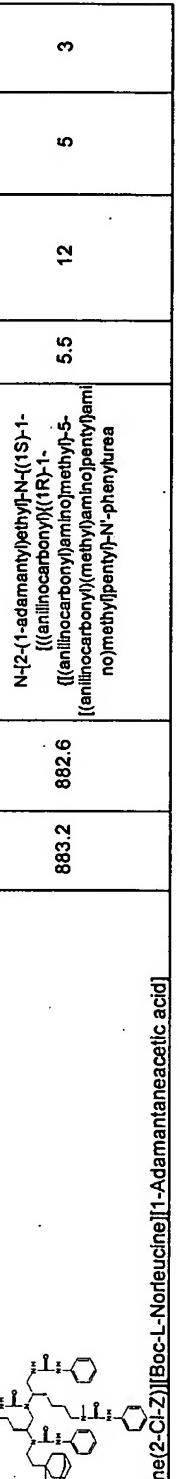
TP1396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
1		1003.3	1002.5	N-[{(5R)-8-(anilinocarbonyl)amino]1-[(anilinocarbonyl)[(2S)-6-((anilinocarbonyl)ethyl)amino]2-(4-methoxyphenyl)ethyl]amino]hexyl}amino]hexyl-N-methyl-N'-phenylurea	4.2	16	6	4
2		1031.4	1030.6	N-[2-(1-adamantyl)ethyl]N-{(5S)-6-[(anilinocarbonyl)(f(R)-1-[(anilinocarbonyl)amino]methyl)5-([(anilinocarbonyl)(methyl)amino]pentyl)amino]no}5-[(anilinocarbonyl)(methyl)amino]hexyl}amino]phenylurea	5.1	15	6	4
3		1007.3	1006.6	N-[{(5R)-8-(anilinocarbonyl)amino]1-[(anilinocarbonyl)(4-cyclohexylbutyl)amino]2-[(anilinocarbonyl)(methyl)amino]hexyl}amino]hexyl-N-methyl-N'-phenylurea	4.8	15	6	4
4		855.1	854.5	N-[{(5R)-8-(anilinocarbonyl)amino]1-[(anilinocarbonyl)[(R)-2-[(anilinocarbonyl)ethyl]amino]hexyl]amino]hexyl}amino]N-methyl-N'-phenylurea	4.5	13	5	3
5		883.2	882.6	N-[2-(1-adamantyl)ethyl]N-{(1S)-1-[(anilinocarbonyl)(f(R)-1-[(anilinocarbonyl)amino]methyl)5-[(anilinocarbonyl)(methyl)amino]pentyl)amino]no}methyl}pentyl}amino]phenylurea	5.5	12	5	3

Figure 22A

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TPI1396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
6		859.2	858.6	N-[{(5R)-6-[(anilinocarbonyl)amino]-5-[(anilinocarbonyl)(2S)-2-(anilinocarbonyl)amino]hexyl}amino]hexyl-N-methyl-N-phenylurea	5.2	12	5	3
7	[Boc-D-Lysine(2-Cl-Z)][Boc-L-Norleucine][Cyclohexanebutyric acid]	889.1	888.5	N-[{(5R)-6-[(anilinocarbonyl)amino]-5-[(anilinocarbonyl)(2R)-2-(anilinocarbonyl)2-(4-methoxyphenyl)ethyl]amino}-3-phenylpropyl]amino]hexyl-N-methyl-N-phenylurea	4.8	13	5	3
8	[Boc-D-Lysine(2-Cl-Z)][Boc-D-Phenylalanine][4-Methoxyphenylacetic acid]	917.2	916.5	N-[2-(1-adamantyl)ethyl]-N-{(1R)-2-[(anilinocarbonyl)(2R)-1-(anilinocarbonyl)amino]methyl}-5-[(anilinocarbonyl)methyl]pentyl-N-1-benzylethyl-N-phenylurea	5.8	12	5	3
9	[Boc-D-Lysine(2-Cl-Z)][Boc-D-Phenylalanine][1-Adamantanecarboxylic acid]	893.2	892.5	N-[{(5R)-6-[(anilinocarbonyl)amino]-5-[(anilinocarbonyl)(4-cyclohexylbutyl)amino]-3-phenylpropyl]amino]hexyl-N-methyl-N-phenylurea	5.5	12	5	3
10	[Boc-D-Lysine(2-Cl-Z)][Boc-D-Phenylalanine][Cyclohexanebutyric acid]	719.9	719.4	N-[{(5R)-6-[(anilinocarbonyl)amino]-5-[(anilinocarbonyl)(2S)-1-(2-(4-methoxyphenyl)ethyl)pyrrolidin-2-y]methyl}amino]hexyl-N-methyl-N-phenylurea	3.7	11	4	2
	[Boc-D-Lysine(2-Cl-Z)][Boc-L-Proline][4-Methoxyphenylacetic acid]							

Figure 22A (cont.)

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TP11396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
11		748.0	747.5	N-((2S)-1-[2-(1-adamantyl)ethyl]pyrrolidin-2-yl)methyl-N-((1R)-1-[(anilinocarbonyl)amino)methyl]-5-[(anilinocarbonyl)(methyl)amino]pentyl)-N'-phenylurea	4.9	10	4	2
12		724.0	723.5	N-((5R)-5-[(anilinocarbonyl)amino]pentyl)-5-[(anilinocarbonyl)[(2S)-1-(4-cyclohexylbutyl)pyrrolidin-2-yl]methyl]hexyl-N-methyl-N'-phenylurea	4.6	10	4	2
13		939.2	938.5	N-((1S)-2-[(anilinocarbonyl)amino]pentyl)-1-(2-naphthylmethyl)ethyl-N-((2S)-6-[(anilinocarbonyl)[(2S)-2-(4-methoxyphenyl)ethyl]amino]hexyl)-N'-phenylurea	5.2	13	5	3
14		967.3	966.6	N-[2-(1-adamantyl)ethyl]-N-((5S)-6-[(anilinocarbonyl)[(2S)-2-(4-naphthylmethyl)ethyl]amino]pentyl)-2-[(anilinocarbonyl)(methyl)amino]hexyl-N'-phenylurea	6.2	12	5	3
15		943.2	942.6	N-((1S)-2-[(anilinocarbonyl)amino]pentyl)-1-(2-naphthylmethyl)ethyl-N-((2S)-6-[(anilinocarbonyl)(4-cyclohexylbutyl)amino]hexyl)-2-[(anilinocarbonyl)(methyl)amino]hexyl-N'-phenylurea	5.9	12	5	3

Figure 22A (cont.)

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TPI1396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
16		791.0	790.4	N[(1 <i>S</i>)-2-{(anilinocarbonyl)amino}-1-(2-naphthylmethyl)ethyl]N-(2 <i>S</i>)-2-(anilinocarbonyl)[2-(4-methoxyphenyl)ethyl]amino]hexyl)-N-phenylurea	5.6	10	4	2
17		819.1	818.5	N-[2-(1-adamantyl)ethyl]N-[(1 <i>S</i>)-1-((anilinocarbonyl)[(1 <i>S</i>)-2-(anilinocarbonyl)amino]-1-(2-naphthylmethyl)ethyl]amino]pentyl)-N-phenylurea	6.3	9	4	2
18		795.1	794.5	N[(1 <i>S</i>)-2-{(anilinocarbonyl)amino}-1-(2-naphthylmethyl)ethyl]N-(2 <i>S</i>)-2-(anilinocarbonyl)[4-(cyclohexylbutyl)amino]hexyl)-N-phenylurea	6.0	9	4	2
19		825.0	824.4	N[(1 <i>S</i>)-2-{(anilinocarbonyl)amino}-1-(2-naphthylmethyl)ethyl]N-(2 <i>S</i>)-2-(anilinocarbonyl)[2-(4-methoxyphenyl)ethyl]amino]-3-phenylpropyl)-N'-phenylurea	5.9	10	4	2
20		853.1	852.5	N-[2-(1-adamantyl)ethyl]N-[(1 <i>S</i>)-2-(anilinocarbonyl)(1 <i>S</i>)-2-(anilinocarbonyl)amino]-1-(2-naphthylmethyl)ethyl]amino]-1-benzylethyl)-N'-phenylurea	6.6	9	4	2

Figure 22A (cont.)

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TP11396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
21		829.1	828.5	N-((1S)-2-[(anilinocarbonyl)amino]-1-(2-naphthylmethyl)ethyl)-N-((2S)-2-[(anilinocarbonyl)(4-cyclohexylbutyl)amino]-3-phenylpropyl)-N'-phenylurea	6.3	9	4	2
22		655.8	655.4	N-((1S)-2-[(anilinocarbonyl)amino]-1-(2-naphthylmethyl)ethyl)-N-((2S)-1-[2-(4-methoxyphenyl)ethyl]pyrrolidin-2-yl)methyl)-N'-phenylurea	4.6	8	3	2
23		683.9	683.4	N-((2S)-1-[2-(1-adamantyl)ethyl]pyrrolidin-2-yl)methyl)-N-((1S)-2-[(anilinocarbonyl)amino]-1-(2-naphthylmethyl)ethyl)-N'-phenylurea	5.8	7	3	2
24		659.9	659.4	N-((1S)-2-[(anilinocarbonyl)amino]-1-(2-naphthylmethyl)ethyl)-N-((2S)-1-[4-cyclohexylbutyl]pyrrolidin-2-yl)methyl)-N'-phenylurea	5.4	7	3	2
25		895.2	894.5	N-((1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl)-N-((2S)-6-((anilinocarbonyl)ethyl)amino)-2-[(anilinocarbonyl)(methyl)amino]hexyl)-N'-phenylurea	4.6	13	5	3

Figure 22A (cont.)

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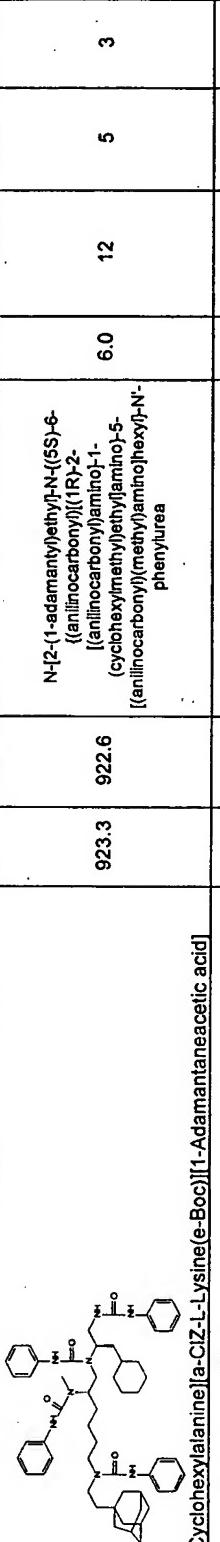
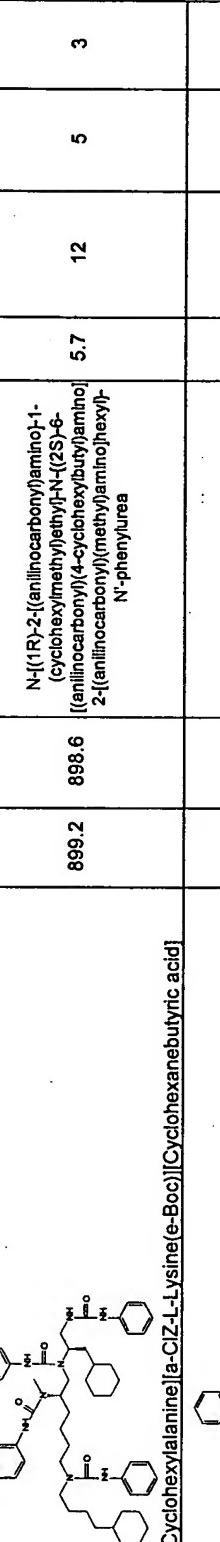
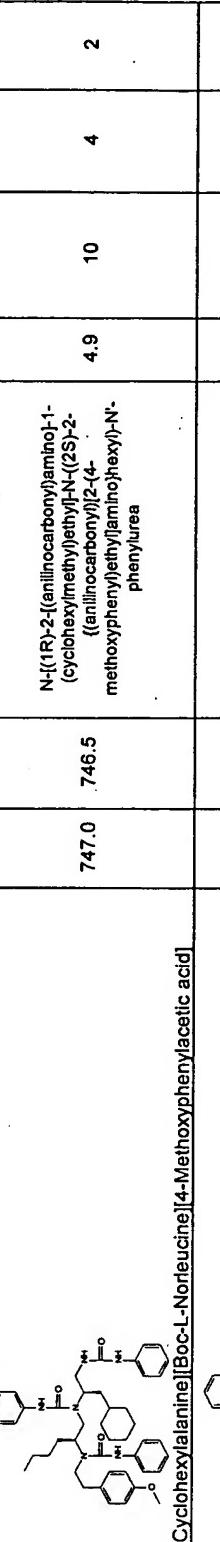
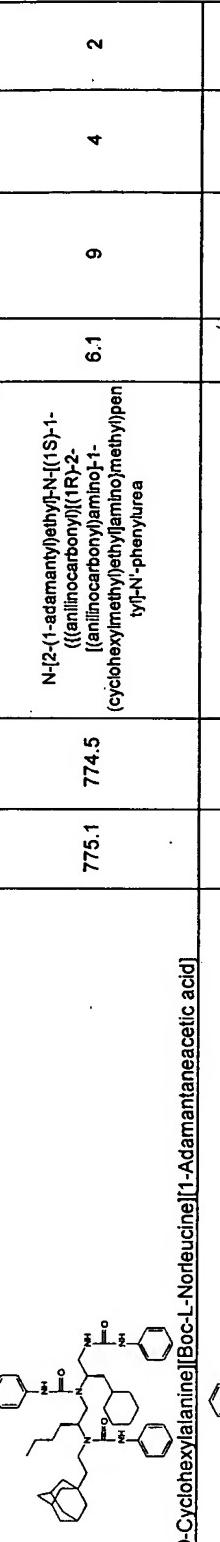
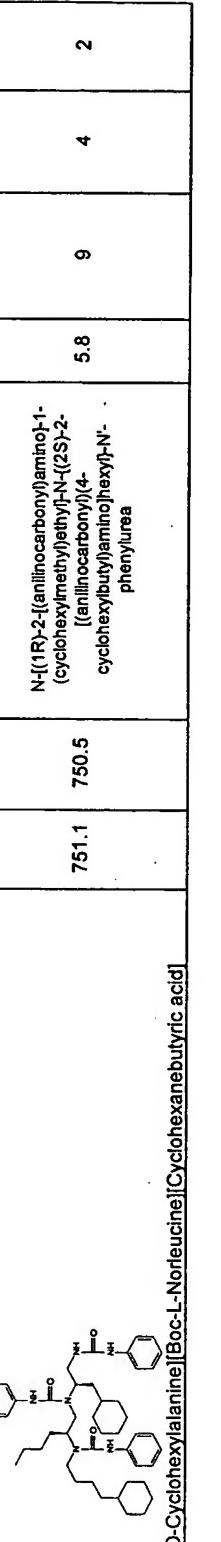
TP1396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
26		923.3	922.6	N-[2-(1-adamantanyl)ethyl]N-((5S)-6-[(anilinocarbonyl)(1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl]amino)-5-[(anilinocarbonyl)(methyl)amino]hexyl]N'-phenylurea	6.0	12	5	3
27		899.2	898.6	N-[(1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl]N-[(2S)-6-[(anilinocarbonyl)(4-cyclohexylbutyl)amino]-2-[(anilinocarbonyl)(methyl)amino]hexyl]N'-phenylurea	5.7	12	5	3
28		747.0	746.5	N-[(1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl]N-[(2S)-2-[(anilinocarbonyl)(4-methoxyphenyl)amino]hexyl]N'-phenylurea	4.9	10	4	2
29		775.1	774.5	N-[2-(1-adamantanyl)ethyl]N-((1S)-1-[(anilinocarbonyl)(1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl]amino)-5-[(anilinocarbonyl)(methyl)amino]pentyl]N'-phenylurea	6.1	9	4	2
30		751.1	750.5	N-[(1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl]N-[(2S)-2-[(anilinocarbonyl)(4-cyclohexylbutyl)amino]hexyl]N'-phenylurea	5.8	9	4	2

Figure 22A (cont.)

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31		781.0	780.4	N-[{(1R)-2-[(anilino)carbonyl]amino}-1-(cyclohexylmethyl)ethyl]-N-[(2R)-2-[(anilino)carbonyl](2-[(4-methoxyphenyl)ethyl]amino)-3-phenylpropyl]-N'-phenylurea	5.2	10	4	2
32		809.1	808.5	N-[2-(1-adamantyl)ethyl]-N-[(1R)-2-[(anilino)carbonyl][(1R)-2-[(anilino)carbonyl]amino]-1-(cyclohexylmethyl)ethyl]amino]-3-benzylethyl-N'-phenylurea	6.4	9	4	2
33		785.1	784.5	N-[{(1R)-2-[(anilino)carbonyl]amino}-1-(cyclohexylmethyl)ethyl]-N-[(2S)-1-2-[(anilino)carbonyl](4-cyclohexylbutyl)amino]-3-phenylpropyl-N'-phenylurea	6.0	9	4	2
34		611.8	611.4	N-[{(1R)-2-[(anilino)carbonyl]amino}-1-(cyclohexylmethyl)ethyl]-N-[(2S)-1-2-[(4-methoxyphenyl)ethyl]pyrrolidin-2-yl)methyl]-N'-phenylurea	4.3	8	3	2
35		639.9	639.5	N-[(2S)-1-2-(1-adamantyl)ethyl]pyrrolidin-2-yl)methyl]-N-[(1R)-2-[(anilino)carbonyl]amino]-3-(cyclohexylmethyl)ethyl-N'-phenylurea	5.5	7	3	2

Figure 22A (cont.)

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TP1396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
36	[Boc-D-Cyclohexylalanine][Boc-L-Proline][Cyclohexanebutyric acid]	615.9	615.5	N-(1R)-2-{(anilinocarbonyl)amino}-1-(cyclohexylmethyl)ethyl-N-((2S)-1-(4-cyclohexylbutyl)pyrrolidin-2-yl)methyl-N-phenylurea	5.1	7	3	2
37	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][1-Phenyl-1-Cyclopropaneacrylic acid]	771.0	770.4	N-(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl-N-((2S)-2-{{(anilinocarbonyl)(1-phenylcyclopropyl)methyl}amino}-3-phenylpropyl)-N'-phenylurea	5.7	9	4	2
38	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][p-Tolylacetic acid]	759.0	758.4	N-(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl-N-((2S)-2-{{(anilinocarbonyl)(4-methyl)phenyl}ethyl}amino}-3-phenylpropyl)-N'-phenylurea	5.9	9	4	2
39	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][3-Methoxyphenylacetic acid]	775.0	774.4	N-(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl-N-((2S)-2-{{(anilinocarbonyl)(3-methoxyphenyl)ethyl}amino}-3-phenylpropyl)-N'-phenylurea	5.4	10	4	2
40	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][4-Methoxyphenylacetic acid]	775.0	774.4	N-(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl-N-((2S)-2-{{(anilinocarbonyl)(4-methoxyphenyl)ethyl}amino}-3-phenylpropyl)-N'-phenylurea	5.4	10	4	2

Figure 22A (cont.)

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TP1396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
41	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][4-Ethoxypheylacetic acid]	789.0	788.4	N-[{(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl}-N-[(2S)-2-[(anilinocarbonyl)amino]-4-ethoxyphenylethyl]amino]-3-phenylpropyl-N'-phenylurea	5.6	10	4	2
42	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Phenylacetic acid]	744.9	744.4	N-[{(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl}-N-[(2S)-2-[(anilinocarbonyl)amino]-3-phenylpropyl]N'-phenylurea	5.7	9	4	2
43	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Hydrocinnamic acid]	759.0	758.4	N-[{(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl}-N-[(2S)-2-[(anilinocarbonyl)amino]-3-phenylpropyl]N'-phenylurea	5.9	9	4	2
44	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Butyric acid]	696.9	696.4	N-[{(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl}-N-[(2S)-2-[(anilinocarbonyl)butyl]amino]-3-phenylpropyl]N'-phenylurea	5.3	9	4	2
45	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Heptanoic acid]	739.0	738.4	N-[{(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl}-N-[(2S)-2-[(anilinocarbonyl)(heptyl)amino]-3-phenylpropyl]N'-phenylurea	5.8	9	4	2

Figure 22A (cont.)

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TP1396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
46		696.9	696.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)(isobutyl)amino]-3-phenylpropyl-N'-phenylurea	5.3	9	4	2
47		724.9	724.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)(4-methylpentyl)amino]-3-phenylpropyl-N'-phenylurea	5.6	9	4	2
48		710.9	710.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)(neopenyl)amino]-3-phenylpropyl-N'-phenylurea	5.4	9	4	2
49		724.9	724.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)(3,3-dimethylbutyl)amino]-3-phenylpropyl-N'-phenylurea	5.6	9	4	2
50		737.0	736.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)(cyclohexylmethyl)amino]-3-phenylpropyl-N'-phenylurea	5.4	9	4	2

Figure 22A (cont.)

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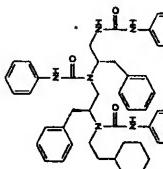
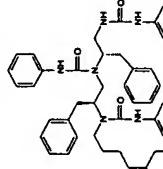
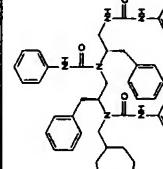
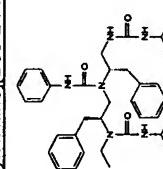
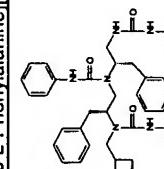
TP11396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
51		751.0	750.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)2-cyclohexylethyl]amino-3-phenylpropyl-N-phenylurea	5.5	9	4	2
52		779.0	778.5	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)4-cyclohexylbutyl]amino-3-phenylpropyl-N-phenylurea	5.8	9	4	2
53		751.0	750.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)cycloheptylmethyl]amino-3-phenylpropyl-N-phenylurea	5.5	9	4	2
54		668.8	668.3	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)ethyl]amino-3-phenylpropyl-N-phenylurea	4.9	9	4	2
55		708.9	708.4	N-[(1S)-2-(anilinocarbonyl)amino]-1-benzylethyl-N-[(2S)-2-(anilinocarbonyl)cyclobutyl]amino-3-phenylpropyl-N-phenylurea	5.0	9	4	2

Figure 22A (cont.)

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TP1336	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
56	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Cyclopentanecarboxylic acid]	722.9	722.4	N-[(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl]-N-[(2S)-2-[(anilinocarbonyl)cyclopentylmethyl]amino]-3-phenylpropyl-N'-phenylurea	5.2	9	4	2
57	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Cyclohexanepropionic acid]	765.0	764.4	N-[(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl]-N-[(2S)-2-{(anilinocarbonyl)[3-cyclohexylmethyl]amino}-3-phenylpropyl]-N'-phenylurea	5.7	9	4	2
58	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][4-Methyl-1-Cyclohexanecarboxylic acid]	751.0	750.4	N-[(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl]-N-[(2S)-2-{(anilinocarbonyl)[4-methylcyclohexylmethyl]amino}-3-phenylpropyl]-N'-phenylurea	5.5	9	4	2
59	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][4-tert-Butyl-cyclohexanecarboxylic acid]	793.1	792.5	N-[(1S)-2-{(anilinocarbonyl)amino}-1-benzylethyl]-N-[(2S)-2-{(anilinocarbonyl)[4-tert-butylcyclohexylmethyl]amino}-3-phenylpropyl]-N'-phenylurea	6.0	9	4	2
60	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][1-Adamantaneacetic acid]	803.1	802.5	N-[2-(1-adamantyl)ethyl]-N-[(1S)-2-{(anilinocarbonyl)(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl}amino]-1-phenylurea	6.2	9	4	2

Figure 22A (cont.)

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TP11396	CHEMISTRY	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
61	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][3-(3-Diphenylpropionic acid)]	835.1	834.4	N-[(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl]-N-[(2S)-2-[(anilinocarbonyl)(3-(3-diphenylpropyl)amino)-3-phenylpropyl]N'-phenylurea	6.6	9	4	2
62	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Cyclopentylacetic acid]	737.0	736.4	N-[(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl]-N-[(2S)-2-[(anilinocarbonyl)(2-cyclopentylethyl)amino]-3-phenylpropyl]N'-phenylurea	5.4	9	4	2
63	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][Indole-3-acetic acid]	784.0	783.4	N-[(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl]-N-[(2S)-2-[(anilinocarbonyl)(2-(1H-indol-3-yl)ethyl)amino]-3-phenylpropyl]N'-phenylurea	4.8	10	5	2
64	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][3-(3,4,5)-Trimethoxyphenylpropionic acid]	849.0	848.4	N-[(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl]-N-[(2S)-2-[(anilinocarbonyl)(3-(3,4,5-trimethoxyphenyl)propyl)amino]-3-phenylpropyl]N'-phenylurea	4.5	12	4	3
65	[Boc-L-Phenylalanine][Boc-L-Phenylalanine][2-Norbornaneacetic acid]	763.0	762.4	N-[(1S)-2-[(anilinocarbonyl)amino]-1-benzylethyl]-N-[(2S)-2-[(anilinocarbonyl)(2-bicyclo[2.2.1]hept-2-yl)ethyl]amino]-3-phenylpropyl]N'-phenylurea	5.7	9	4	2

Figure 22A (cont.)

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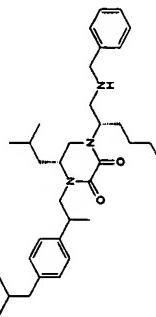
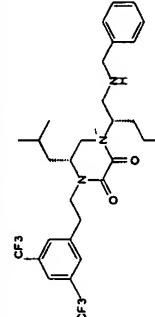
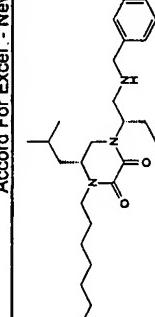
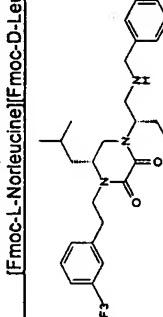
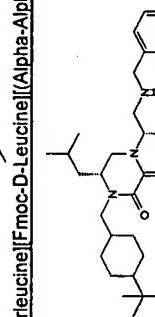
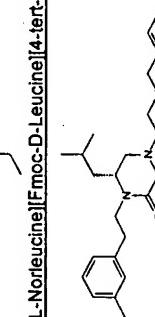
TPI1391	Structures	MW	Exact Mass	Name	M Log P	H Bond Donor	H Bond Donor	Rule Of Five
1		533.8	533.4	(5R)-1-[(1S)-1-[(benzylamino)methyl]pentyl]piperazine-2,3-dione isobutyl-4-(2-(4-isobutylphenyl)propyl)piperazine-2,3-dione	4.6	5	1	2
2		599.7	599.3	(5R)-1-[(1S)-1-[(benzylamino)methyl]pentyl]piperazine-2,3-dione [3-(5-bis(trifluoromethyl)phenyl)ethyl]piperazine-2,3-dione	5.4	5	1	2
3		457.7	457.4	(5R)-1-[(1S)-1-[(benzylamino)methyl]pentyl]piperazine-2,3-dione 5-isobutylpiperazine-2,3-dione	3.7	5	1	0
4		531.7	531.3	(5R)-1-[(1S)-1-[(benzylamino)methyl]pentyl]piperazine-2,3-dione isobutyl-4-(3-(trifluoromethyl)phenyl)ethyl)piperazine-2,3-dione	4.4	5	1	2
5		511.8	511.4	(5R)-1-[(1S)-1-[(benzylamino)methyl]pentyl]piperazine-2,3-dione tert-butyl(cyclohexyl)methyl-5-isobutylpiperazine-2,3-dione	4.5	5	1	2
6		477.7	477.3	(5R)-1-[(1S)-1-[(benzylamino)methyl]pentyl]piperazine-2,3-dione isobutyl-4-(4-(3-methylphenyl)ethyl)piperazine-2,3-dione	3.9	5	1	0

Figure 23A

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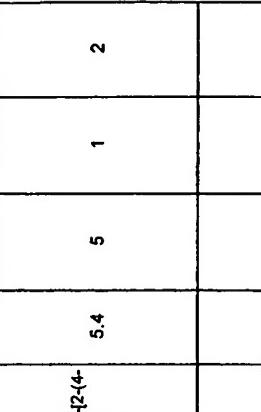
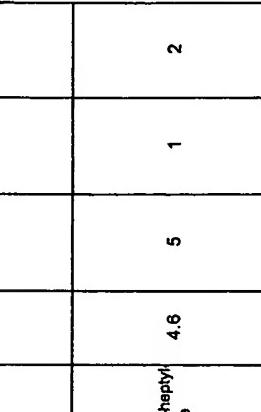
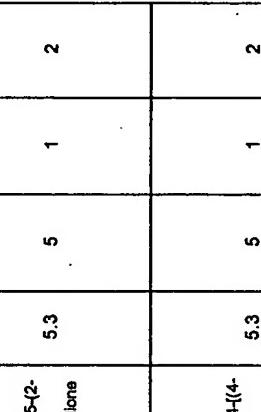
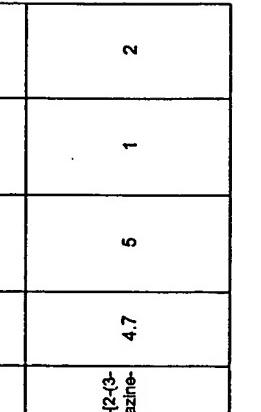
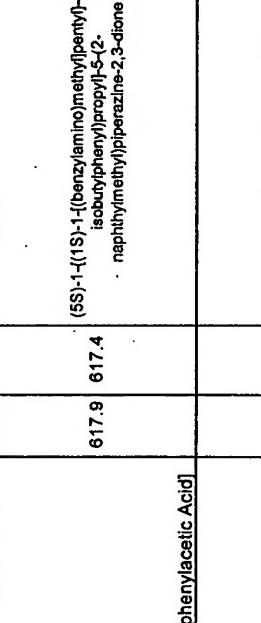
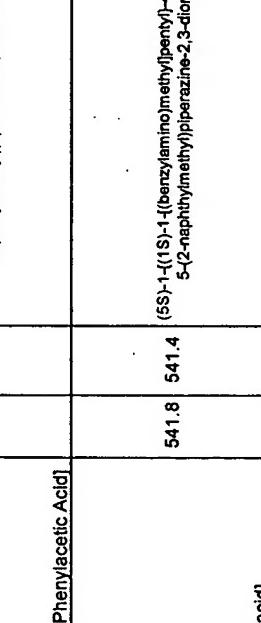
TPI1391	Structures	MW	Exact Mass	Name	M Log P	H Bond Donor	H Bond Donor	Rule Of Five
7		617.9	617.4	(5S)-1-{(1S)-1-[(benzylamino)methyl]pentyl}-5-{(4-isobutylphenyl)propyl}piperazine-2,3-dione	5.4	5	1	2
8		683.7	683.3	(5S)-1-{(1S)-1-[(benzylamino)methyl]pentyl}-4-(2-bis(trifluoromethyl)phenyl)-5-(2-naphthylmethyl)piperazine-2,3-dione	6.2	5	1	2
9		541.8	541.4	(5S)-1-{(1S)-1-[(benzylamino)methyl]pentyl}-4-heptyl-5-(2-naphthylmethyl)piperazine-2,3-dione	4.6	5	1	2
10		615.7	615.3	(5S)-1-{(1S)-1-[(benzylamino)methyl]pentyl}-4-(2-naphthylmethyl)-5-(2-(trifluoromethyl)phenyl)hexyl)piperazine-2,3-dione	5.3	5	1	2
11		595.9	595.4	(5S)-1-{(1S)-1-[(benzylamino)methyl]pentyl}-4-4-(tert-butylcyclohexyl)methyl-5-(2-naphthylmethyl)piperazine-2,3-dione	5.3	5	1	2
12		561.8	561.3	(5S)-1-{(1S)-1-[(benzylamino)methyl]pentyl}-4-(2-(3-methylphenyl)ethyl)-5-(2-naphthylmethyl)piperazine-2,3-dione	4.7	5	1	2

Figure 23A (cont.)

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TP1391	Structures	MW	Exact Mass	Name	M Log P	H Bond Donor	H Bond Donor	Rule Of Five
13		533.8	533.4	(5R)-1-(1(R)-1-(benzylamino)methyl)pentyl-5-isobutyl-4-(2-(4-isobutylphenyl)propyl)piperazine-2,3-dione	4.6	5	1	2
14		599.7	599.3	(5R)-1-(1(R)-1-(benzylamino)methyl)pentyl-5-[3,5-bis(trifluoromethyl)phenyl]ethyl-5-isobutylpiperazine-2,3-dione	5.4	5	1	2
15		457.7	457.4	(5R)-1-(1(R)-1-(benzylamino)methyl)pentyl-5-isobutylpiperazine-2,3-dione	3.7	5	1	0
16		531.7	531.3	(5R)-1-(1(R)-1-(benzylamino)methyl)pentyl-5-isobutyl-4-(2-(3-(trifluoromethyl)phenyl)ethyl)piperazine-2,3-dione	4.4	5	1	2
17		511.8	511.4	(5R)-1-(1(R)-1-(benzylamino)methyl)pentyl-4-(4-tert-butylcyclohexyl)methyl-5-isobutylpiperazine-2,3-dione	4.5	5	1	2
18		477.7	477.3	(5R)-1-(1(R)-1-(benzylamino)methyl)pentyl-5-isobutyl-4-(2-(3-methylphenyl)ethyl)piperazine-2,3-dione	3.9	5	1	0

Figure 23A (cont.)

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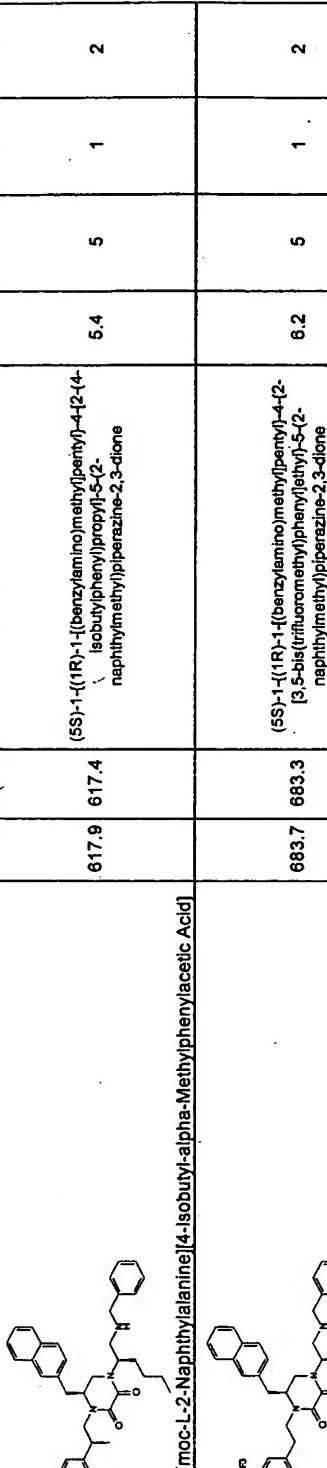
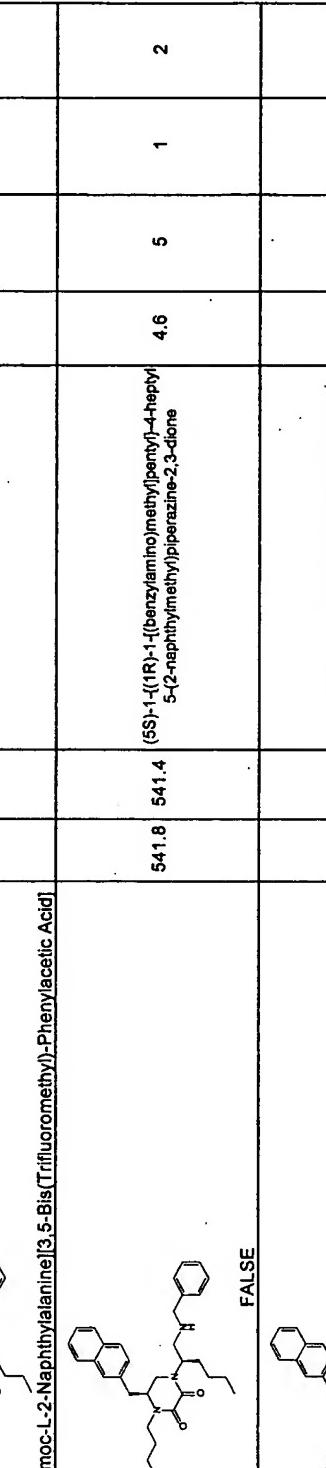
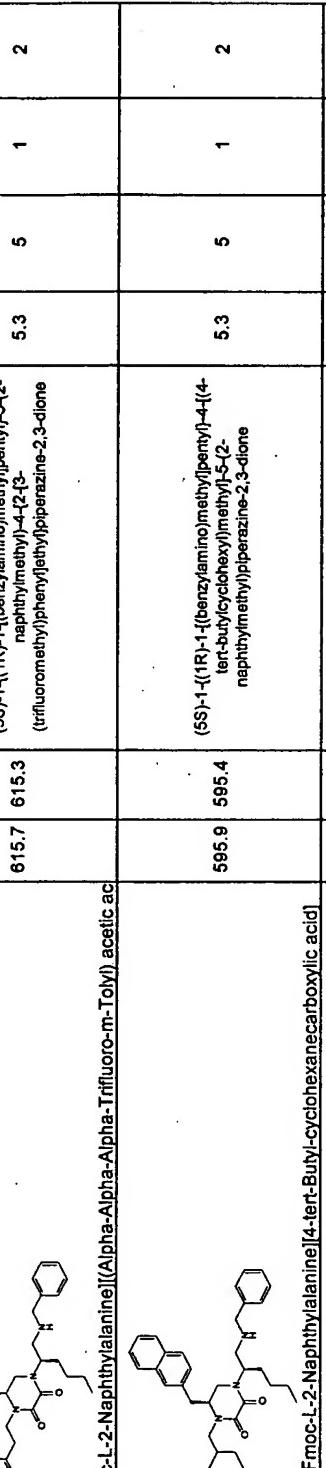
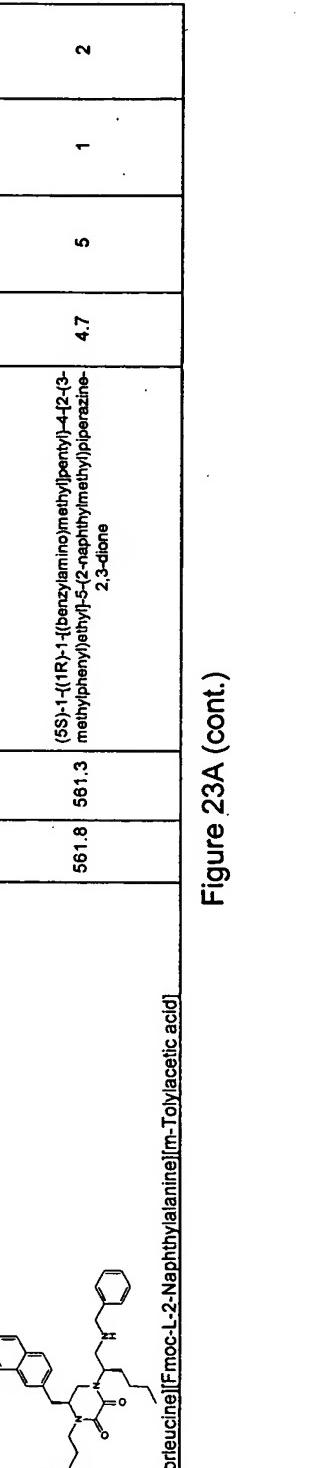
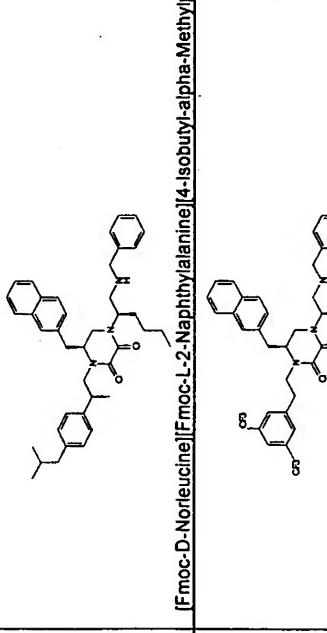
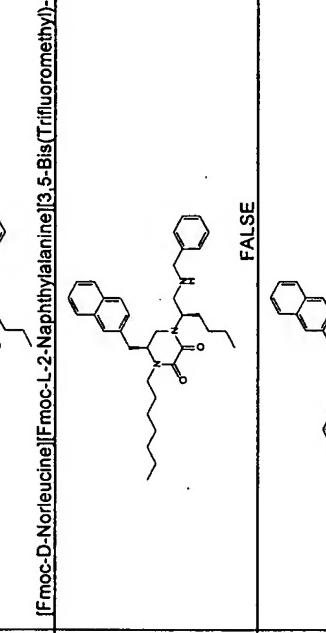
TP1391	Structures	MW	Name	Log P	H Bond Donor	H Bond Acceptor	Rule Of Five
19		617.9	(5S)-1-[(1R)-1-[(benzylamino)methyl]pentyl]-4-[2-(4-isobutylphenyl)propyl]-5-(2-naphthylmethyl)piperazine-2,3-dione	5.4	5	1	2
20		683.7	(5S)-1-[(1R)-1-[(benzylamino)methyl]pentyl]-4-[2-[3,5-bis(trifluoromethyl)phenyl]ethyl]-5-(2-naphthylmethyl)piperazine-2,3-dione	6.2	6	1	2
21		541.8	(5S)-1-[(1R)-1-[(benzylamino)methyl]pentyl]-4-heptyl-5-(2-naphthylmethyl)piperazine-2,3-dione	4.6	5	1	2
22		615.7	(5S)-1-[(1R)-1-[(benzylamino)methyl]pentyl]-5-(2-naphthylmethyl)-4-[2-(trifluoromethyl)phenyl]ethyl)piperazine-2,3-dione	5.3	5	1	2
23		595.9	(5S)-1-[(1R)-1-[(benzylamino)methyl]pentyl]-4-[2-(4-tert-butylcyclohexyl)methyl]-5-(2-naphthylmethyl)piperazine-2,3-dione	5.3	5	1	2
24		561.8	(5S)-1-[(1R)-1-[(benzylamino)methyl]pentyl]-4-[2-(3-methylphenyl)ethyl]-5-(2-naphthylmethyl)piperazine-2,3-dione	4.7	5	1	2

Figure 23A (cont.)

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TP1391	Structures	MW	Name	M Log P	H Bond Donor	H Bond Donor	Rule Of Five
25		617.9	(5R)-1-[(1S)-2-(benzylamino)-1-2-naphthylmethyl]ethyl-4-isobutyl-4-(4-isobutylphenyl)propylpiperazine-2,3-dione	5.4	5	1	2
26		683.7	(5R)-1-[(1S)-2-(benzylamino)-1-2-naphthylmethyl]ethyl-4-[2-(3,5-bis(trifluoromethyl)phenyl)ethyl]-5-isobutylpiperazine-2,3-dione	6.2	5	1	2
27		541.8	(5R)-1-[(1S)-2-(benzylamino)-1-2-naphthylmethyl]ethyl-4-heptyl-5-isobutylpiperazine-2,3-dione	4.6	5	1	2
28		615.7	(5R)-1-[(1S)-2-(benzylamino)-1-2-naphthylmethyl]ethyl-4-[4-(2,3-trifluoromethyl)phenyl]ethyl-5-isobutylpiperazine-2,3-dione	5.3	5	1	2
29		595.9	(5R)-1-[(1S)-2-(benzylamino)-1-2-naphthylmethyl]ethyl-4-[4-tert-butylcyclohexyl]ethyl-5-isobutylpiperazine-2,3-dione	5.3	5	1	2
30		561.8	(5R)-1-[(1S)-2-(benzylamino)-1-2-naphthylmethyl]ethyl-4-[4-(3-methylphenyl)ethyl]ethyl-5-isobutylpiperazine-2,3-dione	4.7	5	1	2

Figure 23A (cont.)

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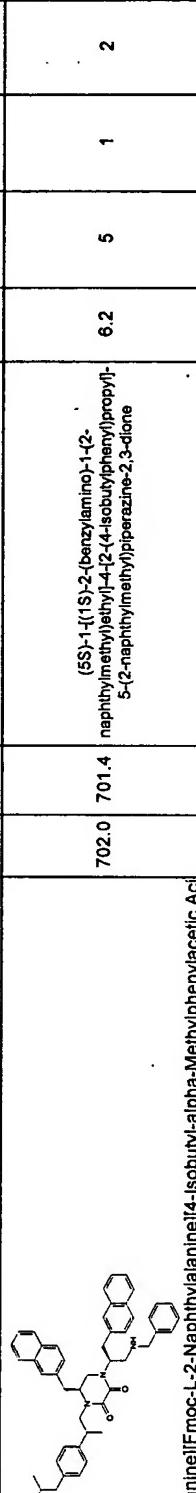
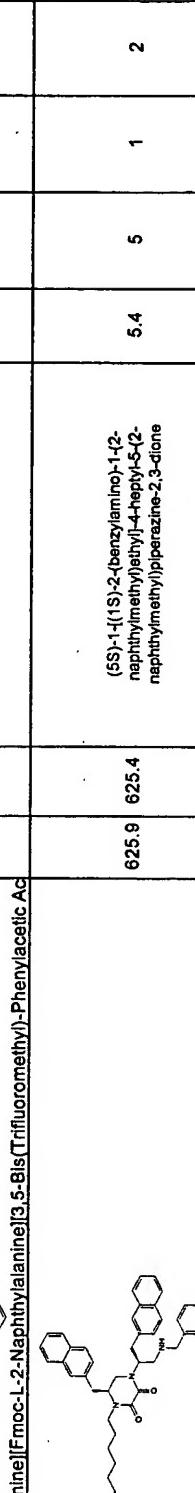
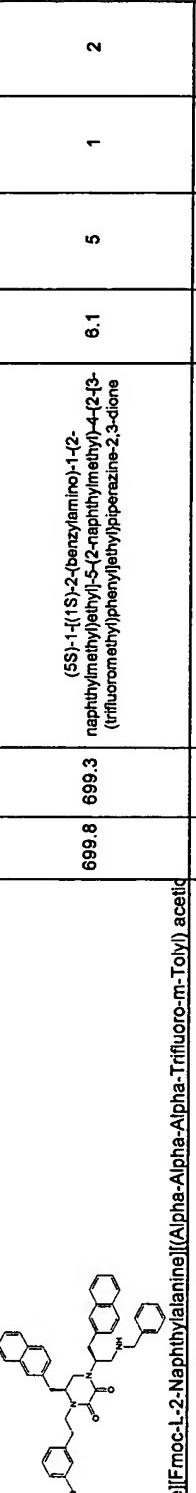
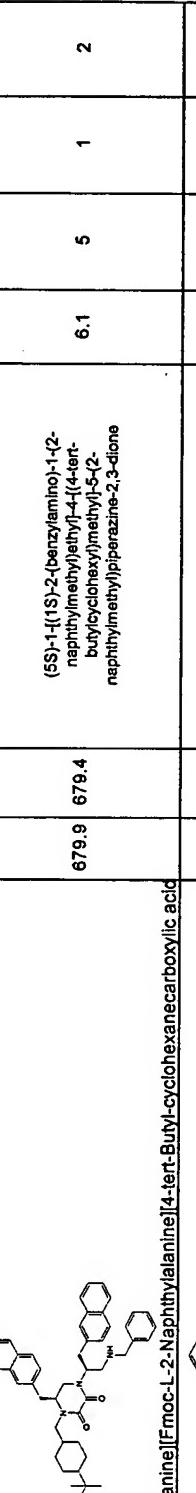
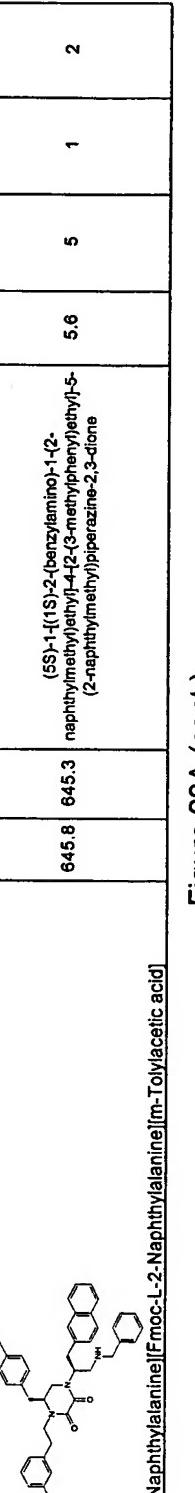
TP1391	Structures	MW	Name	M Log P	H Bond Donor	H Bond Donor	Rule Of Five
31		702.0	(5S)-1-[{(1S)-2-(benzylamino)-1-[2-naphthylmethyl]ethyl}-4-[2-(4-isobutylphenyl)propyl]-5-(2-naphthylmethyl)piperazine-2,3-dione	6.2	5	1	2
32		767.8	(5S)-1-[{(1S)-2-(benzylamino)-1-[2-naphthylmethyl]ethyl}-4-[2-(3,5-bis(trifluoromethyl)phenyl)methyl]piperazine-2,3-dione	7.0	5	1	2
33		625.9	(5S)-1-[{(1S)-2-(benzylamino)-1-[2-naphthylmethyl]ethyl}-4-heptyl-5-(2-naphthylmethyl)piperazine-2,3-dione	5.4	5	1	2
34		699.8	(5S)-1-[{(1S)-2-(benzylamino)-1-[2-naphthylmethyl]ethyl}-5-(2-naphthylmethyl)-4-[2-(3-trifluoromethyl)phenyl]ethyl]piperazine-2,3-dione	6.1	5	1	2
35		679.9	(5S)-1-[{(1S)-2-(benzylamino)-1-[2-naphthylmethyl]ethyl}-4-[2-(4-tert-butylcyclohexyl)methyl]piperazine-2,3-dione	6.1	5	1	2
36		645.8	(5S)-1-[{(1S)-2-(benzylamino)-1-[2-(2-naphthylmethyl)phenyl]ethyl}-4-[2-(3-methylphenyl)methyl]piperazine-2,3-dione	5.6	5	1	2

Figure 23A (cont.)

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TP1140	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
1		606.9	606.4	N-[3-[(2S,5S)-1-4-(1,1'-biphenyl)-4-y]ethyl]-5-(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazo[2-4-ethoxyphenyl]acetamide	5.6	6	1	2
2		530.8	530.4	N-[3-[(2S,5S)-5-(cyclohexylmethyl)-1-4-phenyl]ethyl]-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazo[2-4-ethoxyphenyl]acetamide	4.7	6	1	2
3		558.8	558.4	N-[3-[(2S,5S)-5-(cyclohexylmethyl)-1-4-phenylbutyl]ethyl]-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazo[2-4-ethoxyphenyl]acetamide	5.1	6	1	2
4		524.8	524.4	N-[3-[(2S,5S)-5-(cyclohexylmethyl)-1-heptyl]ethyl]-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazo[2-4-ethoxyphenyl]acetamide	4.8	6	1	2
5		522.8	522.4	N-[3-[(2S,5S)-1-5-bis(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazo[2-4-ethoxyphenyl]2-4-ethoxyphenyl]acetamide	4.8	6	1	2
6		578.9	578.5	N-[3-[(2S,5S)-1-[(4-tert-butylcyclohexyl)methyl]-5-(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazo[2-4-ethoxyphenyl]2-4-ethoxyphenyl]acetamide	5.5	6	1	2

Figure 24A

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TP1140	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
7		588.9	588.4	N-[3-[(2S,5S)-1-[2-(1-adamantanyl)ethyl]-5-(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-al]imidazo[2-y]lpropyl]-2-(4-ethoxypyhenyl)acetamide	5.7	6	1	2
8		606.9	606.4	N-[3-[(2S,5R)-1-[2-(1,1-biphenyl-4-yl)ethyl]-5-(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-al]imidazo[2-y]lpropyl]-2-(4-ethoxypyhenyl)acetamide	5.6	6	1	2
9		530.8	530.4	N-[3-[(2S,5R)-5-(cyclohexylmethyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-al]imidazo[2-y]lpropyl]-2-(4-ethoxypyhenyl)acetamide	4.7	6	1	2
10		558.8	558.4	N-[3-[(2S,5R)-5-(cyclohexylmethyl)-1-(4-phenylbutyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-al]imidazo[2-y]lpropyl]-2-(4-ethoxypyhenyl)acetamide	5.1	6	1	2
11		524.8	524.4	N-[3-[(2S,5R)-5-(cyclohexylmethyl)-1-heptyl-2,3,5,6-tetrahydro-1H-imidazol[1,2-al]imidazo[2-y]lpropyl]-2-(4-ethoxypyhenyl)acetamide	4.8	6	1	2
12		522.8	522.4	N-[3-[(2S,5R)-1,5-bis(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-al]imidazo[2-y]lpropyl]-2-(4-ethoxypyhenyl)acetamide	4.8	6	1	2

Figure 24A (cont.)

TPI1400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
13		578.9	578.5	N-[3-(2S,5R)-1-[(4-tert-butylcyclohexyl)methyl]-5-(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[2-4-ethoxypyhenyl]-2-yl]propyl]acetamide	5.5	6	1	2
14		588.9	588.4	N-[3-(2S,5R)-1-[(1-adamantyl)ethyl]-5-(cyclohexylmethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[2-4-ethoxypyhenyl]-2-yl]acetamide	5.7	6	1	2
15		650.9	650.4	N-[3-[(2S,5S)-1-[(1,1'-biphenyl)-4-ylethyl]-5-(2-naphthylmethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[2-4-ethoxypyhenyl]-2-yl]propyl]acetamide	5.9	6	1	2
16		574.8	574.3	N-[3-(2S,5S)-5-(2-ethoxypyhenyl)-N-[3-[(2S,5S)-5-(2-naphthylmethyl)-1-(2-phenylbutyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[2-4-ethoxypyhenyl]-2-yl]propyl]acetamide]	5.1	6	1	2
17		602.8	602.4	N-[3-(2S,5S)-5-(2-ethoxypyhenyl)-N-[3-[(2S,5S)-5-(2-naphthylmethyl)-1-(4-phenylbutyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[2-4-ethoxypyhenyl]-2-yl]propyl]acetamide]	5.4	6	1	2
18		568.8	568.4	N-[3-(2S,5S)-1-heptyl-5-(2-ethoxypyhenyl)-N-[3-[(2S,5S)-1-heptyl-5-(2-naphthylmethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[2-4-ethoxypyphenyl]-2-yl]propyl]acetamide]	5.1	6	1	2

Figure 24A (cont.)

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TPI1400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
19	[Boc-L-Naphthylalanine][Cyclohexanecarboxylic acid][4-Ethoxypheylacetic acid]	566.8	566.4	N-[3-{(2S,5S)-1-(cyclohexylmethyl)-5-(2-naphthylmethyl)-2,3,5,6-tetrahydron-1H-imidazo[1,2-aj]imidazo[2-aj]propyl}-2-(4-ethoxypheyl)acetamide]	5.1	6	1	2
20	[Boc-L-Naphthylalanine][4-tert-Butyl-cyclohexanecarboxylic acid][4-Ethoxypheylacetic acid]	622.9	622.4	N-[3-{(2S,5S)-1-[4-(4-tert-butylcyclohexylmethyl)-5-(2-naphthylmethyl)-2,3,5,6-tetrahydron-1H-imidazo[1,2-aj]imidazo[2-aj]propyl]-2-(4-ethoxypheyl)acetamide]	5.8	6	1	2
21	[Boc-L-Naphthylalanine][4-Adamantaneacetic acid][4-Ethoxypheylacetic acid]	632.9	632.4	N-[3-{(2S,5S)-1-[2-(1-adamantanyl)ethyl]-5-(2-naphthylmethyl)-2,3,5,6-tetrahydron-1H-imidazo[1,2-aj]imidazo[2-aj]propyl}-2-(4-ethoxypheyl)acetamide]	6.0	6	1	2
22	[Boc-D-Naphthylalanine][4-Biphenylacetic acid][4-Ethoxypheylacetic acid]	650.9	650.4	N-[3-{(2S,5R)-1-[2-(1,1'-biphenyl-4-yl)ethyl]-5-(2-naphthylmethyl)-2,3,5,6-tetrahydron-1H-imidazo[1,2-aj]imidazo[2-aj]propyl}-2-(4-ethoxypheyl)acetamide]	5.9	6	1	2
23	[Boc-D-Naphthylalanine][Phenylacetic acid][4-Ethoxypheylacetic acid]	574.8	574.3	N-[3-{(2S,5R)-5-(2-ethoxypheyl)-N-[3-(2S,5R)-5-(2-naphthylmethyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydron-1H-imidazo[1,2-aj]imidazo[2-aj]propyl]acetamide]	5.1	6	1	2
24	[Boc-D-Naphthylalanine][4-Phenylbutyric acid][4-Ethoxypheylacetic acid]	602.8	602.4	2-(4-ethoxypheyl)-N-[3-{(2S,5R)-5-(2-naphthylmethyl)-1-(4-phenylbutylyl)-2,3,5,6-tetrahydron-1H-imidazo[1,2-aj]imidazo[2-aj]propyl}acetamide]	5.4	6	1	2

Figure 24A (cont.)

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TPI1400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
25		568.8	568.4	2-(4-ethoxyphenyl)-N-[3-[(2S,5R)-1-heptyl-5-(2-naphthylmethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-a]imidazol[2-y]l]propyl]-5-(2-ethoxyphenyl)acetamide	5.1	6	1	2
26		566.8	566.4	N-[3-[(2S,5R)-1-(cyclohexylmethyl)-5-(2-naphthylmethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-a]imidazol[2-y]l]propyl]-2-(4-ethoxyphenyl)acetamide	5.1	6	1	2
27		622.9	622.4	N-[3-[(2S,5R)-1-(4-tert-butylcyclohexylmethyl)-5-(2-naphthylmethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-a]imidazol[2-y]l]propyl]-2-(4-ethoxyphenyl)acetamide	5.8	6	1	2
28		632.9	632.4	N-[3-[(2S,5R)-1-(1-adamantylmethyl)-5-(2-naphthylmethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-a]imidazol[2-y]l]propyl]-2-(4-ethoxyphenyl)acetamide	6.0	6	1	2
29		486.7	486.3	N-[3-[(2S,5S)-5-(cyclohexylmethyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-a]imidazol[2-y]l]propyl]-2-phenylacetamide	4.9	5	1	1
30		486.7	486.3	N-[3-[(2S,5R)-5-(cyclohexylmethyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazol[1,2-a]imidazol[2-y]l]propyl]-2-phenylacetamide	4.9	5	1	1

Figure 24A (cont.)

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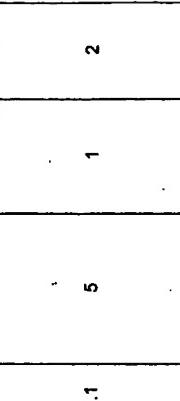
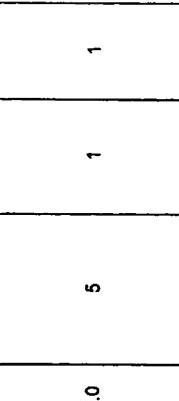
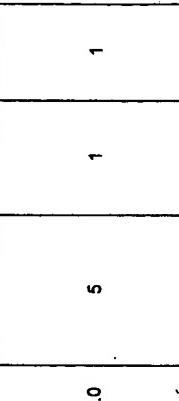
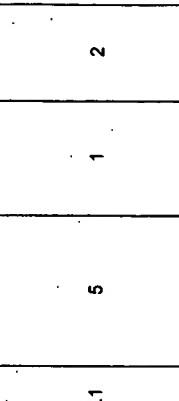
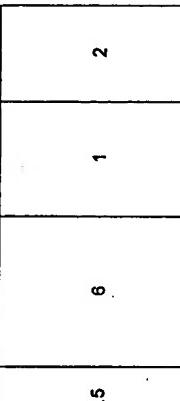
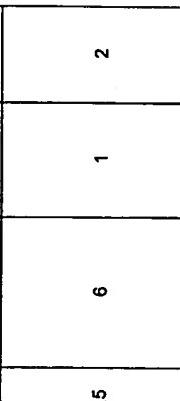
TPI400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
31		515.1	514.2	N-[3-(2S,5R)-5-(4-chlorobenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl]propyl]phenylacetamide	5.1	5	1	2
32		498.6	498.3	N-[3-(2S,5R)-5-(4-fluorobenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl]propyl]phenylacetamide	5.0	5	1	1
33		498.6	498.3	N-[3-(2S,5S)-5-(4-fluorobenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl]propyl]phenylacetamide	5.0	5	1	1
34		515.1	514.2	N-[3-(2S,5R)-5-(2-chlorobenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl]propyl]phenylacetamide	5.1	5	1	2
35		524.7	524.3	N-[3-(2S,5S)-5-(4-ethoxybenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl]propyl]phenylacetamide	4.5	6	1	2
36		524.7	524.3	N-[3-(2S,5R)-5-(4-ethoxybenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl]propyl]phenylacetamide	4.5	6	1	2

Figure 24A (cont.)

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TPH400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
37		510.7	510.3	N-[3-((2S,5R)-5-(4-methoxybenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl)propyl]-2-phenylacetamide	4.3	6	1	2
38		748.4	748.1	N-[3-((2S,5S)-5-(4-hydroxy-3,6-diolobenzyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl)propyl]-2-phenylacetamide	5.4	6	2	2
39		530.7	530.3	N-[3-((2S,5S)-5-(2-naphthylmethyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl)propyl]-2-phenylacetamide	5.2	5	1	2
40		530.7	530.3	N-[3-((2S,5R)-5-(2-naphthylmethyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl)propyl]-2-phenylacetamide	5.2	5	1	2
41		556.8	556.3	N-[3-((2S,5S)-5-(1,1'-biphenyl-4-ylmethyl)-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl)propyl]-2-phenylacetamide	5.5	5	1	2
42		494.7	494.3	N-[3-((2S,5S)-5-benzyl-1-(2-(4-methylphenyl)ethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-a]imidazol-2-yl)propyl]-2-phenylacetamide	4.8	5	1	1

Figure 24A (cont.)

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TPI1400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
43		498.6	498.3	N-[3-((2S,5S)-5-benzyl-1-12-(4-fluorophenyl)ethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[1,2-ij]propyl]-2-phenylacetamide	5.0	5	1	1
44		510.7	510.3	N-[3-((2S,5S)-5-benzyl-1-12-(3-methoxyphenyl)ethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[1,2-ij]propyl]-2-phenylacetamide	4.3	6	1	2
45		510.7	510.3	N-[3-((2S,5S)-5-benzyl-1-12-(4-methoxyphenyl)ethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[1,2-ij]propyl]-2-phenylacetamide	4.3	6	1	2
46		524.7	524.3	N-[3-((2S,5S)-5-benzyl-1-12-(4-ethoxyphenyl)ethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[1,2-ij]propyl]-2-phenylacetamide	4.5	6	1	2
47		556.8	556.3	N-[3-((2S,5S)-5-benzyl-1-12-(1,1'-biphenyl)-1-yl)ethyl]-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[1,2-ij]propyl]-2-phenylacetamide	5.5	5	1	2
48		508.7	508.3	N-[3-((2S,5S)-5-benzyl-1-(4-phenylbutylyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-aj]imidazo[1,2-ij]propyl]-2-phenylacetamide	5.0	5	1	2

Figure 24A (cont.)

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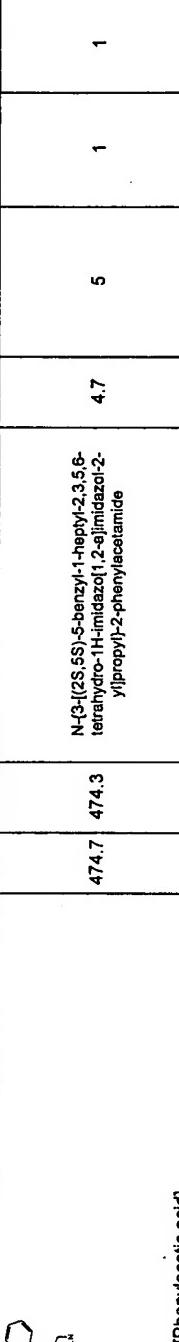
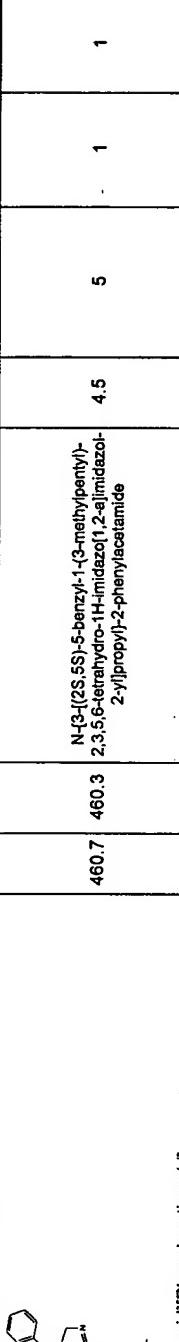
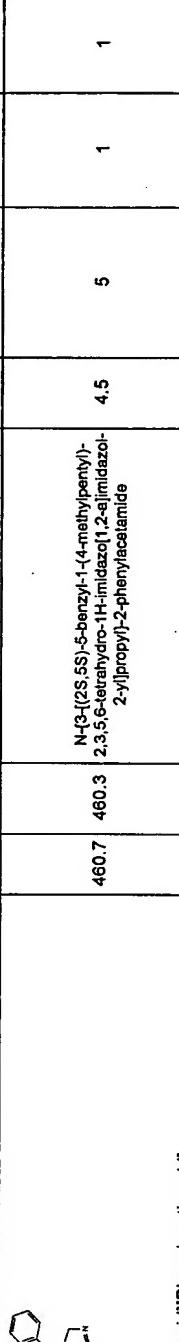
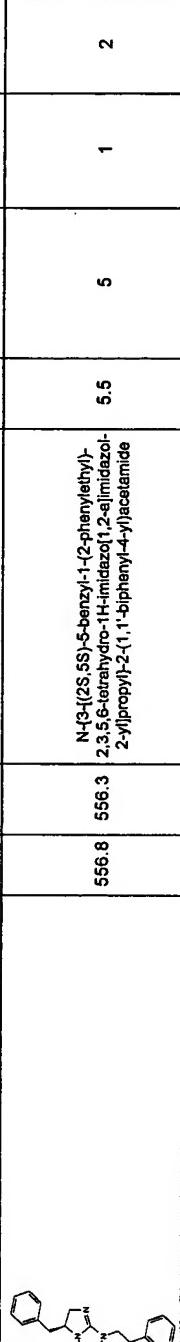
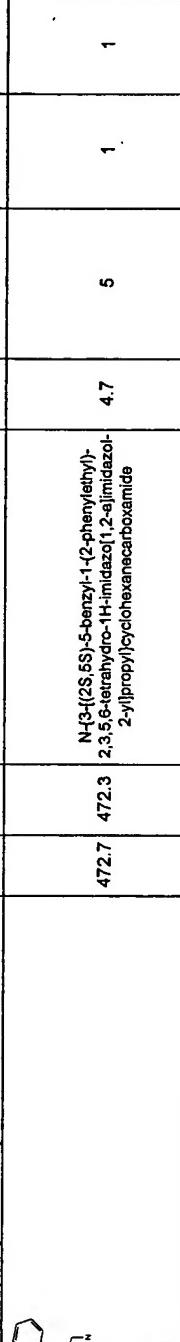
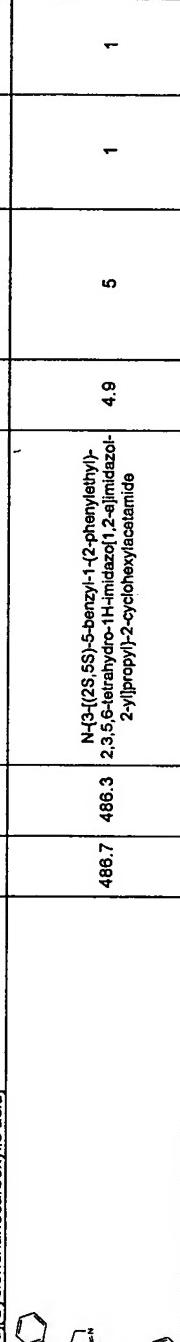
TP1400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
49		474.7	474.3	N-[3-[(2S,5S)-5-benzyl-1-hexyl-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazol-2-yl]propyl]-2-phenylacetamide	4.7	5	1	1
50		460.7	460.3	N-[3-[(2S,5S)-5-benzyl-1-(3-methylpentyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazol-2-yl]propyl]-2-phenylacetamide	4.5	5	1	1
51		460.7	460.3	N-[3-[(2S,5S)-5-benzyl-1-(4-methylpentyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazol-2-yl]propyl]-2-phenylacetamide	4.5	5	1	1
52		556.8	556.3	N-[3-[(2S,5S)-5-benzyl-1-(2-phenoxyethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazol-2-yl]propyl]-2-(1,1'-biphenyl-4-yl)acetamide	5.5	5	1	2
53		472.7	472.3	N-[3-[(2S,5S)-5-benzyl-1-(2-phenoxyethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazol-2-yl]propyl]-2-cyclohexanecarboxamide	4.7	5	1	1
54		486.7	486.3	N-[3-[(2S,5S)-5-benzyl-1-(2-phenoxyethyl)-2,3,5,6-tetrahydro-1H-imidazo[1,2-e]imidazol-2-yl]propyl]-2-cyclohexaneacetic acid	4.9	5	1	1

Figure 24A (cont.)

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TP1400	Structures	MW	Exact Mass	Name	M Log P	H Bond Acceptor	H Bond Donor	Rule Of Five
55		514.8	514.4	N-[3-(2S,5S)-5-benzy1-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo1[2-alkimidazol-2-yl]propyl]-4-cy clohexylbutanamide	5.2	5	1	2
56		486.7	486.3	N-[3-(2S,5S)-5-benzy1-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo1[2-alkimidazol-2-yl]propyl]cycloheptaneacrylic acid	4.9	5	1	1
57		486.7	486.3	N-[3-(2S,5S)-5-benzy1-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo1[2-alkimidazol-2-yl]propyl]3-cyclopentylpropanoic acid	4.9	5	1	1
58		616.6	616.3	N-[3-(2S,5S)-5-benzy1-1-(2-phenylethyl)-2,3,5,6-tetrahydro-1H-imidazo1[2-alkimidazol-2-yl]propyl]-2-(5-bis(trifluoromethyl)phenyl)acetamide	6.4	5	1	2

Figure 24A (cont.)

ID #	Name	MW	Structure	Relative caspase 3 activity *	@ 25 ug/ml	[lowest] ug/ml **	TPI 1396- L-proline
TPI 1509-1	N-[(5R)-6-[(anilinocarbonyl)amino]-5-[(anilinocarbonyl)[((2R)-1-[2-(4-methoxyphenyl)ethyl]pyrrolidin-2-yl)methyl]amino]hexyl]-N-methyl-N-phenylurea	719.9		2.2	6.25	10	
TPI 1509-2	N-[(2R)-1-[2-(1-adamantyl)ethyl]pyrrolidin-2-yl]methyl)-N-[(1R)-1-[(anilinocarbonyl)amino]methyl]-5-[(anilinocarbonyl)(methyl)amino]pentyl]-N-phenylurea	748.0		2.5	12.5	11	
TPI 1509-3	N-[(5R)-6-[(anilinocarbonyl)amino]-5-[(anilinocarbonyl)pyrrolidin-2-yl]methyl]amino]hexyl]-N-methyl-N-phenylurea	724.0		2.4	12.5	12	
TPI 1509-4	N-[(1S)-2-[(anilinocarbonyl)amino]-1-[(naphthylmethyl)ethyl]-N-[(2R)-1-[2-(4-methoxyphenyl)ethyl]pyrrolidin-2-yl]methyl]amino]hexyl]-N-phenylurea	655.8		2.4	25	22	

Figure 34

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ID #	Name	MW	Structure	@ 25 ug/ml	[lowest] ug/ml **	L-proline
TPI 1509-5	N-((2R)-1-[2-(1-adamantyl)ethyl]pyrrolidin-2-yl)methyl-N-((1S)-2-(anilinocarbonyl)amino)-1-(2-naphthylmethyl)ethyl-N-phenylurea	683.9		2.5	25	23
TPI 1509-6	N-((1S)-2-[(anilinocarbonyl)amino]-1-(2-naphthylmethyl)ethyl)-N-[(2R)-1-(4-cyclohexylbutyl)pyrrolidin-2-yl]methy)-N-phenylurea	659.9		2.0	12.5	24
TPI 1509-7	N-((1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl)-N-((2R)-1-2-(4-methoxyphenyl)ethyl)pyrrolidin-2-yl)methyl)-N-phenylurea	611.8		2.4	25	34
TPI 1509-8	N-((2R)-1-[2-(1-adamantyl)ethyl]pyrrolidin-2-yl)methyl-N-((1R)-2-(anilinocarbonyl)amino)-1-(cyclohexylmethyl)ethyl-N-phenylurea	639.9		2.2	25	35

Figure 34 (cont.)

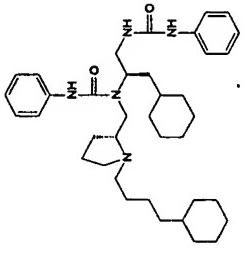
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ID #	Name	MW	Structure	@ 25 ug/ml	[lowest] ug/ml **	L-proline
TPI 1509-9	N-[(1R)-2-[(anilinocarbonyl)amino]-1-(cyclohexylmethyl)ethyl]-N-[(2R)-1-(4-cyclohexylbutyl)pyrrolidin-2-yl][methyl]-N'-phenylurea	615.9		2.2	25	36

Relative caspase-3* activity in the XIAP derepression assay was calculated as the ratio of the Vmax in the presence of each compound divided by the Vmax of the controls having the lowest concentration in which the relative caspase 3 activity was 1.8

Figure 34 (cont.)

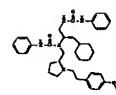
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TPI 1540
Code: 1077
Modifications of TP1509-7

TP1509-7 Parent compound
D-Cyclohexylalanine, D-Proline

Lipinski Alerts: MW>500, MLogP > 4.16, HBD>5, HBA>10

Structure	MW	Modification	R group	Yield (mg)	MLogP	Hydrogen Bond Donors	Hydrogen Bond Acceptors	Lipinski Alerts
6 L-cyclohexylalanine analog	611.38	Stereochemistry	R1	54.3	4.26	3	8	2
7 L-Proline, L-cyclohexylalanine analog	611.38	Stereochemistry	R1 and R2	64.4	4.26	3	8	2
8 Split parent compound-Left side	353.21	Removal of R1 and associated urea	R1	14.8	2.63	2	5	0
9 Split parent compound-Right side	394.24	Removal of R2 and R3	R2 and R3	32	3.02	4	6	0
10 Remove R3	477.31	Removal of R3	R3	5.6	3.29	4	7	0
11 Remove R3-Acetyl substitution (ethyl)	505.3	Replacement of R3 with ethyl	R3	51.1	3.68	3	7	1
12 Remove R2-Glycine substitution	585.37	Removal of R2	R2	56.1	3.90	3	8	1

Figure 35A

Structure	MW	Modification	R group	Yield (mg)	MLogP	Hydrogen Bond Donors	Hydrogen Bond Acceptors	Lipinski Alerts
13 Remove R2-(D-Alanine) substitution	599.38	Replacement of pyrrolidine with N-methylalanine	R2	60.2	4.08	3	8	1
14 Remove urea 2-methyl substitution	506.36	Removal of N-urea	Urea	48.7	3.89	2	6	1
15 Remove R1-Glycine substitution	515.2	Removal of R1	R1	51.2	2.97	3	8	1
16 Remove R1-(D-Alanine) substitution	529.31	Replacement of R1 with methyl	R1	51.5	3.16	3	8	1
17 Remove urea 1-methyl substitution	506.36	Removal of N'-urea	Urea	10.3	3.89	2	6	1
18 Remove ureas-benzoyl substitution	581.36	Replacement of phenylurea with phenylacetyl	Urea	15.2	4.95	1	6	2
19 Remove ureas-acetylate	457.33	Replacement of phenylurea with acetyl	Urea	18.8	3.01	1	6	0
20 Urea substitution-ethyl isocyanate	515.38	Replacement of phenylurea with ethylurea	Urea	53	2.71	3	8	1

Figure 35A (cont.)

Structure	MW	Modification	R group	Yield (mg)	MLogP	Hydrogen Bond Donors	Hydrogen Bond Acceptors	Lipinski Alerts
21 	639.41	Replacement of phenylurea with p-methylphenylurea	Urea	67.7	4.61	3	8	2
22 	647.36	Replacement of phenylurea with p-fluorophenylurea	Urea	72.2	4.70	3	8	2
23 	701.35	Replacement of phenylurea with p-nitrophenylurea	Urea	66.4	4.39	3	14	3

Figure 35A (cont.)

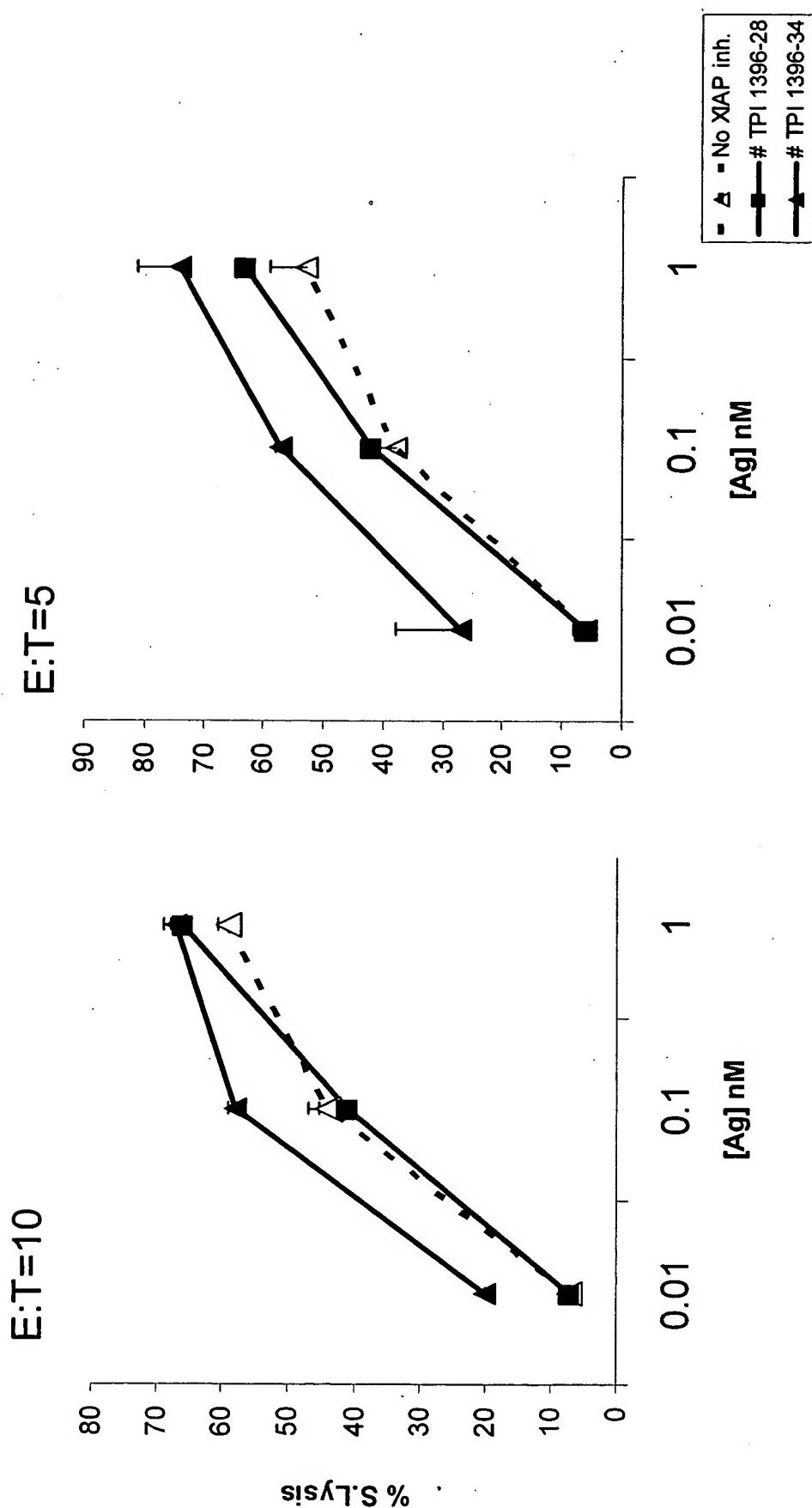


Figure 39